

Historic, Archive Document

Do not assume content reflects current scientific knowledge, policies, or practices.

32A

CURRENT LITERATURE
IN
AGRICULTURAL ENGINEERING

LIBRARY
RECEIVED
DEC 21 1931

UNITED STATES DEPARTMENT OF AGRICULTURE
BUREAU OF AGRICULTURAL ENGINEERING

WASHINGTON, D. C.

Vol. 1, No. 5.

December, 1931.

Aerologist. Vol. 7, No. 11.

November, 1931.

Effect of Heating Method, Humidifiers and Persons on Humidity
in Heated Rooms. By John H. D. Blanko. p.17-18.

Publication Policies and Prestige: Editorial. p.22-23, 45-46.

Agricultural Engineering. Vol. 12, No. 11. November, 1931.

Present Trends in Dairy Management Methods and Structures.

By J. D. Long. p.399-405.

Conclusions: 1. Design of dairy structures is dependent on management methods and equipment used, as well as on type and quality of product. 2. Structural designs and management methods permitting maximum production per worker are necessary for economical production. 3. Separate milking and housing facilities have proven successful over period of years and are increasingly popular. There would seem to be no reason why designs cannot be developed to meet any climatic conditions. 4. Chief advantages claimed for two-unit systems are: (a) Increased animal comfort. (b) Greater convenience. (c) Economy. (d) Increased sanitation. (e) Improved quality of product. 5. The disadvantages of two-unit system are: (a) Increased possibilities of transmitting disease through herd by way of grain box where successive cows are fed in milking barn. (b) Poorer facilities for showing cows advantageously. (c) Two to four days required to break cows to system. (d) Higher type of intelligence is required in laborers for successful operation.

Relation of the Agricultural Engineer to the Farm Equipment Industry. By L. J. Fletcher. p.406-408.

Tremendous strides have been taken already in engineering of utilization of farm equipment. Establishing of standards of dimensions and operating characteristics, such as bolt drives, power take-offs and drawbar heights. Our new Bureau of Agricultural Engineering in U. S. Department of Agriculture, has established most extensive program of investigation in

farm power and machinery. Among more important of these projects, are artificial drying of forage crops, direct harvesting and artificial drying of rice, machinery for controlling insect pests, corn and cotton production machinery, sugar cane harvesting machines, fertilizer distributing machines, machinery and methods for corn borer control, and cotton ginning investigation. In addition, it is planned to make new extensive study of utilization and cost of power and machinery in agriculture.

Training of Research Workers. By Dr. Andrew Boss. p.409-411.
Assumes (1) that research work is recognized as specific function in advancement of science; (2) that it is advisable to develop in research worker knowledge of methods and technic of science; (3) that this knowledge and technic can best be developed by individual through suitable course of education, training and experience.

Method of Comparing Plow Bottom Shapes. By Wallace Ashby.
p.411-412.

Characteristics of Rural Electric Lines. By C. P. Wagner.
p.413-415.
Rural line characteristics, loads and obsolescence due to rapid growth of loads have made it difficult to maintain satisfactory voltage regulation and at same time hold down cost. If distribution engineers are to design economical and satisfactory lines, agricultural engineers must anticipate and advise them of future developments in farm loads.

General-Purpose Farm Equipment in Iowa. By Arthur A. Collins.
p. 416-418.
Theoretical factors influencing most economical size of tractor can be tabulated as follows: 1. Productive capacity as measured by drawbar horsepower or otherwise. 2. Total investment for machinery required for operating certain acreage. 3. Cost of maintenance.

Poppelsdorf Mole-Tile Drainage System. By N. L. Wallem.
p.419-420.
Idea of Poppelsdorf drainage system is briefly as follows: Tiles are lined up on rope or cable which is connected with mole and pulled in behind it. After end of proposed tile line has been reached by mole (tractor with windlass remaining stationary at end of field) connection between rope and mole is released and rope is pulled out in opposite direction, while tiles stay in tunnels and mole is wound up to be transported to another line. Way mole tile operation is done assures very close joints between tiles. Tiles are pulled in under slight pressure, which, however, is not great enough to crack them. Experts stated that tiles laid behind mole were

lying better in their tunnels than when laid by hand.
Mole-tile system of draining land makes it possible
to utilize tractors more efficiently and to drain
about double an area of land at same expense.

American Agriculturist. Vol. 128, No. 15. October 10, 1931.

Where a Storage Collar Pays. p.11.

Diagram gives cross-section of concrete storage collar,
showing construction details.

American Architect. Vol. CXXXIX, No. 2596. June, 1931.

It had to be Thatch and Fireproof. By Daniel David Merrill.
p.26-28, 76.

How to Avoid the Pitfalls in Electrical Specifications.
By Louis Mackler. p.36-37, 78-80.

Vol. CXXXIX, No. 2598. August, 1931.

Chimney Tops from England and America. p.26-29.

American Builder and Building Age. Vol. 51, No. 4. July, 1931.

Production of Low Cost Housing. p. 66-69, 106, 108, 110.
Discusses Aiken method, concrete slabs, Fabricrete, the
welded house.

Vol. 51, No. 5. August, 1931

Gates. p. 51.

Mission, English, Colonial, American, Norman.

American Thresherman and Farm Equipment. Vol. XXIV, No. 7.
November, 1931.

What Oil Should I Use? By W.E. Miller. p.4, 18.

Farm Machinery Prices. By Dusty Miller. p.5, 15.

Farm equipment prices may be reduced and reduction may come
at time when farm crop level is on upgrade, but for farmer
to feel that price trend of farm equipment and price trend
of products of farm must go hand in hand is matter that is
pretty much out of question because two are not governed
by same economic laws.

Grain Storage in the Southwest. By W. E. Grimes. p. 12-13.

Architectural Forum. Vol. LV, No. 2, Pt.2. August, 1931.

Small House Construction: A Problem to be Solved. By Norman
N. Rico. p.217-222.

Architectural Record. Vol.70, No.5. November, 1931.

Design of Cattle Barns. p.375-379.
Combine milking stall described.

Design of Horse Stables. p.381-383.

Greenhouses and Conservatories. p.387-390.

Australian Sugar Journal. Vol.XXIII, No.7. Oct.8, 1931.

Irrigation Commissioner's Report. p.381-382. Editorial p.352.

Automotive Industries. Vol.65, No.21. November 21, 1931.

Farm Use of Cars and Trucks Doubles, Opening Wider Market.
By Norman Damon. p.785-787, 810-811.
Farm use of automotive equipment has more than doubled in past decade. Five million automobiles and motor trucks--a fifth of total registered in United States--and nearly a million tractors were in use on farms in 1930, according to final reports from the Farm Census of 1930.

Bimonthly Bulletin. Ohio Agricultural Experiment Station. No.152.
Sept.-Oct. 1931.

Life of Farm Machinery. By F.L.Morison. p.194-195.
Table gives life of machinery on farms in Greene and Medina Counties, Ohio.

Nov.-Dec., 1931. No.153.

Study of Ice Chests. By Faith B. Lanman. p.209-215.
Brief study here reported was made to compare temperatures maintained, amount of ice melted, and effect on condition of certain foodstuffs in ice chest having 5/8-inch cork-board insulation with one having no special provision for insulation except that supplied by paper and so-called "dead air space", as in ordinary ice chests on market.

Practical Underground Storage. By Donald Comin. p.215-223.
Diagram gives construction details of storage cellar at Ohio station.

Forcing Plants with Artificial Light. By Alex Laurie and G.H.Poesch. p.228-232.

Factors Affecting Nitrates in Soils. By J.W.Ames. p.232-244.

British Sugar Beet Review. Vol.V, No.3. November, 1931.

Effect of Concentrated Fertilizers on Early Development of Sugar Beet. By J.R.M.Spray. p.55-57.

Cold Storage. Vol. XXXIV, No. 402. September 17, 1931.

Note on Experimental Rapid Freezing Gelatin Gel for Test Purposes.
By T. Moran. p.262.

Air Agitation for Ice Making. p.264.

Method of agitation was brought about by injecting air into water while freezing, continuous flow of air preventing formation of air glóbulos on to ice while freezing process was going on. Air agitation comprised two distinct systems, i.e., low pressure system and high pressure system. Low pressure system was generally considered to be better of two for following reasons: (1) Installation was less expensive; (2) maintenance costs were lower; (3) lower pressure of air was required and total cost of production was cheaper, while providing product equal in quality to that produced by either medium or high pressure systems.

Commercial Standards Monthly. Vol. 8, No. 5. November, 1931.

Value of Specifications to Industry: Standardization of specifications has been a major factor in attaining industrial leadership. By Capt. D. B. Wainwright, Jr. p.135-137. Promotion of knowledge of materials of engineering and standardization of specifications and methods of testing has been great factor in attaining industrial leadership for our country and is essential to future maintenance of this supremacy.

Domestic Engineering, Vol. 137, No. 2. October, 17, 1931.

Evolution of an Interesting Country Water Supply System. By R. M. Starbuck. p. 42-43, 140-141.

Heating in Residences and Small Structures. By H. L. Alt. p.55-57, 144-145.

How to calculate radiation by B.t.u. Method. How to figure air changes with B.t.u. Method.

Vol. 137, No. 3. October 31, 1931.

How an Overflow Cesspool Was Drained. p.34.

Three or four lengths of $1\frac{1}{2}$ -in. pipe were coupled together with additional pipe at upper end dipping down to bottom of cesspool. Siphon was then filled with water by forcing water from garden hose into lower end of pipe. When pipe had been filled, immediately hose was withdrawn siphon started to operate and continued until cesspool had been drained to level of bottom of pipe dipping into it.

Domestic Engineering. Vol. 137, No. 3. October 31, 1931. (Cont'd)

Heating Residences and Small Structures. By H. L. Alt. p.48-51, 131-133.

Piping for hot water heating system. Sizing by valve area method. Sizing by factor method. How to favor radiators on lower floors.

Electric Journal. Vol. 28, No. 11. November, 1931.

Role of Small Motors in Heating and Ventilating. By A. G. Smith. p.637-640.

Discusses fans and blowers, types of motors and control, application of motors to fans. System of fans, ducts, and blowers delivers much of air we breathe and heat we feel. Success of system depends upon quietness and efficiency of driving motors.

Electrical World. Vol. 98, No. 21. November 21, 1931.

Individual Drives Operate Cotton Gin Economically. By W. Dan Sinclair. p.908-909.

Engineering News-Record. Vol. 107, No. 19. November 5, 1931.

Issue of Flood Protection: Editorial. p.717.

Discussion of revision of Mississippi River flood-control plan.

Earthquake-Proof Dam in Chile. p.725.

Design is earth-quake-resisting and is based on two principles: (1) building rockfill that will not flatten further under shock; and (2) making it watertight by slope pavement that will flex without rupture.

Welded Siphons on New Orleans Drainage System: Electrically welded 14-ft. steel siphons, largest ever built, from direct and cross-connections of high and low-level canals. Large screw pumps. p.735-376.

Improved Steel-House Construction. By Thomas J. Foster. p.740.

Table gives relative costs of brick-veneer house versus steel house construction.

Vol. 107, No. 21. November 19, 1931.

Experiments in Gunite Control at Syracuse Reservoir. p.807-810.
By E. P. Stewart.

Low Streamflows Again Cause Concern in Southeastern States. p.817.

Groundwater reserves are depleted below all previous records--Lack of rainfall adds to the shortage of run-off--Municipal water supplies are benefiting by experience gained in the 1925 drought period.

Engineering News-Record. Vol. 107, No. 22. November 26, 1931.

Efficient Construction: Editorial. p.831-832.

Flood-protection work along Mississippi.

Plug Small Leaks: Editorial. p.832.

Water conservation sometimes is necessarily tied to execution of large-scale program. Simple improvements in regulation may be able to produce saving in available supplies.

Residences of Welded Steel Construction.

Residence with Welded Frame of Standard Structural Shapes.

By A.F. Davis. p. 839-840.

Welded Steel House Utilizes Shop-Fabricated Frame.

By B. S. Havens. p.840.

Vol. 107, No. 23. December 3, 1931.

State Supervision of Dams: Editorial. p.871.

Systematic examination of 827 dams within scope of new act, by thorough field examination as well as by stress analysis and computation. Of 827 dams, roughly one-third were found to be in need of alterations, repairs or changes of some sort--frequently removal of obstructions from spillways or enlargement of latter. One-third were found to require further examination, such as borings, or inspection at lower water level, before final decision could be reached. Only one-third could be pronounced definitely up to state's requirements.

Horizontal Shear and Shearing Deflection of Beams. By Robins Fleming. p.896-897.

New design data based on recently revised lists of Carnegie and Bethlehem structural shapes, with some figures on built-up girders.

Experiment Station Record. Vol. 65, No. 8. December, 1931.

Agricultural Experiment Stations in 1930. p.702-707.

Progress in all lines of station work is noted, but particular attention is given to investigations in agricultural economics, rural sociology, home economics, and agricultural engineering during five years since passage of Purnell Act.

Extension Service Review. Vol. 2, No. 11 November, 1931.

Forces Making Farm Life Attractive. By K.L. Hatch. p.169-170.

Five forces at work at present moment to increase attractiveness of farm home. (1) Power, (2) transportation, (3) leisure, (4) beauty, and (5) a steady job.

Farm and Ranch. Vol. 50, No. 40. October 3, 1931.

Where Alfalfa Is King of the Fields: Irrigated western valleys offer perfect rotation and livestock set-up with the legume as a basis. By T.C. Richardson. p.1,3, 12.

Mechanical Refrigeration of Milk. By R. H. Lush. p.19.

Cooling tank constructed at material cost of slightly over \$20. Outside dimensions of tank are 45 by 49 inches and 26 inches deep with inside capacity of 111 gallons water or room for three 10-gallon cans of milk. Outer shell is 3 inches concrete lined with 3 inches of granulated corkboard. Corkboard was laid in bottom of tank first after being coated with hot asphalt. Metal tank was set inside with hot asphalt cork sheets packed in around it. Hinged pine cover containing 3 inches of corkboard is counterpoised for easy raising and lowering, thus checking tendency to leave lid up and waste refrigeration. Tank also has drain for cleaning and overflow pipe to keep water at 21 inch level.

Farm Implement News. Vol. 52, No. 48. November 26 1931.

Two-Row Corn Binder Possibilities: Editorial. p.10.

Increasing Profit with Good Farm Equipment. p.18-19.

Farm Journal. Vol. LV, No. 12. December, 1931.

Fewer but Bigger Acres: Halve the acreage, use more plant food, double the yield and profit. By R. E. Stephenson. p.14, 26

Farm Machinery and Equipment. No. 1774. October 15, 1931.

Soil Erosion Big Problem: Federal program stresses the need of well-planned terraces. p.20.

Farmer Vol. XLIX, No. 39. October 3, 1931.

Saving Labor in Putting Up Fuel Wood: Devices enable one man to work alone. p.14.

One-man saw device; buck frame for one-man saw; hoist for sawing heavy logs.

Several Ways to Make A Cistern. p.36.

Fuel Oil Journal. Vol. X, No. 6. December, 1931.

Comparison of Intermittent and Continuous Firing. By Arthur H. Senner. p.14-16, 107-108.

Supplying Hot Water in Range Burner Installations. By J. George Kohl. p.44-46.

Agricultural Progress Has Followed the Plow. By Dr. W. E. Taylor. p.4, 11.
Story of plow, its development and accomplishments, places it at top of honor list of agricultural implements.

Heating and Ventilating. Vol. XXVIII, No. 11. November, 1931.

Operating Data for Gas Cooled Residences. p.69-70.

Cost Data for Residence Cooling and Heating. p.70.

Heating-Piping and Air Conditioning. Vol. III, No. 9. September, 1931.

How to Install and Care for Gages of the Bourdon Tube Type.
By John A. Hasek. p.727-733.

Control of Heat, Light and Sound in Modern Buildings.
By Edgar C. Rack. p.734-740.

Study of the Combustible Nature of Solid Fuels. By R. V. Frost. p.771-777.

Hoard's Dairyman. Vol. 76, No. 19. October 10, 1931.

Electric Power on the Farm: Results of cost experiment at Oregon State College. By C. D. Byrne. p.672.

Iowa Milk House: Total cost of materials was \$88.06. p.675.
Diagrams give floor plan, cross section, and milk cooling tank.

House & Garden. Vol. IX, No. 2. August, 1931.

Waterproofing Methods for Cellar Walls: Treatments that assure dry basements in new or remodeled houses. By Tyler Stewart Rogers. p. 54-55, 81.

Ice and Refrigeration. Vol. 81, No. 4. October, 1931.

Sixth International Congress of Refrigeration. p.205-206.
August 27 - September 10, 1932.

Space Cooling in the Home. By Donald B. Keyes. p.220.

Refrigerated Truck Makes Test Run From Los Angeles to New York. p.222.

Idaho Farmer. Vol. XLVIII, No. 14. October 1, 1931.

Great American Desert Blossoms: Reclamation works wonders, but future should be safeguarded by increased water storage.
By John Thomas. p.3, 18.

Slogan should be, "Not more farms, but better farms," and better farms can only be made by providing adequate supply of water in years of drought.

Implement and Machinery Review. Vol. 57, No. 679.

Agricultural Tractor Demonstration in France. p.688-689.

Demonstration of Cook's Sugar Beet Harvester. p.691-692.

1931 Model "Boby-Soeness" Flax Puller. p.695-696.

Machine is provided with series of movable needles or fingers, which enter strip of growing flax and, as machine travels forwards, these raise growing flax from any position to vertical standing one. By this means flax is raised clear of all weeds and is prepared for subsequent pulling. Special dividers gather flax together and feed it into mouth of puller. During this process of feeding it is impossible for flax to move from its vertical position, neither can it fall backwards or forwards nor escape from correct pulling position. Actual pulling is done by one special belt running over pulleys, belt being held in contact at tension sufficient to pull flax out of ground but without in any way tearing or injuring flax tissues. This belt grips flax in manner equivalent to clasp of hand when hand-pulling. Pulled flax is thereupon brought to binding attachment and subsequently delivered automatically from side of machine in sheaves. Machine will pull from 5 to 6 acres per day.

Implement & Tractor Trade Journal. Vol. XLVI, No. 23. November 7, 1931.

Farmers Still Calling For Mills: Burr type feed grinders and roughage mills experiencing greatest demand in years with little indication of let-up. p.13.

Vol. XLVI, No. 24. November 21, 1931.

It's a Good Year for Shredders: Shortage of legume roughage makes stover desirable and opens way to an increased use of Husker-Shredder units. By E. T. Leavitt. p.11, 12.

Quick Use of Manure Pays Best: Direct hauling by spreaders from barn to field and use as top dressing adds materially to next season's yield. p.13, 24.

College-Built Corn Harvester: South Dakota experimental machine combines husking and elevating operations and saves husks for commercial use. p.14.

Implement & Tractor Trade Journal. Vol. XLVI, No. 25. December, 5, 1931.

As the Census Figures Show It: Agriculture has greatly improved its position during the last ten-year period, both as to production and methods. p.7, 10.

Implement Record. Vol. 28, No. 11. November, 1931.

Suggested Retail Selling Prices on Staple Farm Implements.
p.34-38.

Industrial and Engineering Chemistry. Vol. 23, No. 11. November, 1931.

Paint Thinners. By H.K. Salzberg, F.L. Browne, and I.H. Odell. p.1214-19.
Authors describe test made with accelerated weathering apparatus of white house paints reduced with different types of turpentine and petroleum thinners and applied to white- and yellow-pine panels. Careful analysis of results with special consideration given to effect of wood properties on deterioration of paint leads to conclusion that substitution of petroleum type for turpentine type of thinner diminishes to a slight degree durability of paint. More turpentine than petroleum thinners can be added in producing same degree of thinning.

Thermodynamic Properties of Dichlorodifluoromethane, a New Refrigerant. By Ralph M. Buffington and Joseph Fleischer. p.1290-1292.
Part IV-Specific heat of liquid and vapor and latent heat of vaporization.

Thermodynamic Properties of Dichlorodifluoromethane, a New Refrigerant: Part V-Correlation, checks, and derived quantities.
By Ralph M. Buffington and W. K. Gilkey. p. 1292-1294.

International Sugar Journal. Vol. XXIII, No. 392. August, 1931.

Falkiner Cane Harvester in Florida. By Earl L. Symes. p.388-390.

Journal of Agricultural Research. Vol. 43, No. 8. October 15, 1931.

Decomposition of Green Manures Grown on a Soil and Turned Under Compared to the Decomposition of Green Manures added to a Fallow Soil. By Nathan R. Smith and Harry Munfeldt. p.715-731.

Journal of Dairy Science. Vol. XIV, No. 6. November, 1931.

Influence of Environmental Temperature on the Percentage of Butter Fat in Cows Milk. By H. J. Brooks. p.483-493.
It is generally accepted that there is inverse correlation between environmental temperature and percentage of butter fat in cow's milk. It was with the aim of verifying this relationship that present study was made.

Journal of the Ministry of Agriculture. Vol. XXXVIII, No.6.
September, 1931.

Cold Storage of Apples. By Cyril West. p.585-593.

Range Shelters for Young Poultry. By Prof. Raymond T.
Parkhurst. p.612-617.

Manufacturers Record. Vol. C, No.19. November 5, 1931.

Agricultural Wastes and Industry. By C. A. Basore. p.22-23.
Cottonseed hulls, cornstalks, corncobs, waste wood, waste
straw, peanut hulls can all be utilized.

Market Growers Journal. Vol. XLIX, No. 10. November 15, 1931.

Western Irrigation Coming East: Water-tables sinking in West
gives growers trouble, overhead in West and ditch in East
may solve some problems. p.666.

Marchand. Vol. 7, No. 20. October 20, 1931.

Tracteurs et Motoculteurs. (Tractors and power cultivators)
p.25-47.

Montana Farmer. Vol. 19, No. 6. November 15, 1931.

A Farm Water System. p.16.

Monthly Weather Review. Vol. 59, No. 8. August, 1931.

Some Problems of the Boulder Canyon-Colorado River Development.
p.295-297.
Periods of extreme high and low flow, silt, political com-
plications, financing of the project.

New England Homestead. Vol. 103, No. 14. October 3, 1931.

Squelching the Fire Demon: We must take systematic precautions
to prevent farm fires. Here's how. By K.J.T. Ekblaw.
p.3, 8.

Vol.103, No. 15. October 10, 1931.

After the Beans are Harvested: Treat them to prevent damage
from the destructive weevil. By W.D. Whitcomb. p.3.
Diagram shows machine that throws out bad beans when it
sees them. In operation, beans to be sorted are fed into
hopper on machine. Passing under this hopper is drum with
number of small apertures around its circumference, and
with constant suction drawing air through holes. Beans
are thus picked up by suction and carried around on edge of
drum. On their way to sorting eye they pass mechanical
"patter" which adjusts them to correct position so electric
eye can view them properly. Viewing chamber in which

New England Homestead. Vol. 103, No. 15. October 10, 1931. (Cont'd)

electric eye watches beans is so arranged that intense light falls on each bean as it passes in front of photo-electric tube. Revolving drum moves in small jumps, pausing moment between jumps, and thus there is brief period during which each bean rests in front of sorting eye without movement, thus preventing any shadows from interfering with accuracy of device.

Vol. 103, No. 17. October 24, 1931.

House for the Hens: Lower material costs make this fall a good time to build. By Grace Jenney. p.5, 8.

New Jersey Agriculture. Vol. XIII, No. 12. December, 1931.

Farm Fences: They may be a nuisance unless you choose properly. By E.R. Gross. p.6-7.

New Reclamation Era. Vol. 22, No. 11. November, 1931.

Policies with Respect to Reservoirs. By Dr. Elwood Mead. p.230-233.

Expansion of irrigated area depends on storage. Financing irrigation reservoirs. Water right questions on interstate streams. Examples of present activities of Reclamation Bureau. Hoover Dam construction shows value of water.

Economic Aspects of Federal Reclamation. By George O. Sanford. p.236-239.

Difficulties experienced. Necessity of farm advisers. Federal reclamation policy. Benefits of reclamation. Cotton production relatively unimportant. Distribution of benefits. Future Plans.

Need for Additional Water Supplies in the Irrigated Areas of the Western States. p.250-252.

(50 per cent of the land now irrigated in Western States is in need of supplementary water supplies, varying from need for slight additional storage facilities to tide over last of series of dry years, to need of almost an entire normal supply of irrigation water.

Northwest Farm Equipment Journal. Vol. XLV, No. 11. November, 1931.

Electricity's Relation to Farming Stressed. p.21, 24-26.

Pencil Points. Vol. XII, No. 12. December, 1931.

Electric Wiring Service for the Modern Home: A discussion of some things which are often overlooked. By Arthur Bates Lincoln. p.885-888.

The Lighting outlet. Switch Box. Convenient outlet. Panel Board. Service lines and meter box. Second floor plan. Basement outlets. Wiring outlets on floor plans.

Power. Vol. 74, No. 19. November 10, 1931.

Hydro Power Provides Revenue for Irrigation Works. By Dr. Hugh A. Brown. p.663-665.

By combining power development with irrigation dams it is possible to pay project's construction costs from power sales. Under new policy, power profits are first applied to repaying power plant's cost, then dam and reservoir cost, and after that they are credited to reclamation fund.

Vol. 74, No. 23. December 2, 1931.

A. S. M. E. Holds 52nd Annual Meeting in New York. p.817-819.

Power discussions cover fuels, industrial power, boiler feed water, central station power, steam tables, lubrication, hydraulics and oil engines.

Power Plant Engineering. Vol. XXV, No. 22. November 15, 1931.

Economics of Engineering. By Wm. S. Monroe. p.1098-1099.

Technical progress undoubtedly will continue, but probably it will not be quite as fast and furious as it was during past 10 yr. It will be more carefully studied and thought out in advance, both from engineering and economical point of view.

Drying Out Motors After Floods. By S.C. Smith. p.1102-1103.

Cleaning equipment after submergence, drying by means of current through windings, time required for drying.

Vol. XXV, No. 23. December 1, 1931.

Spillway Waste Power Salvaged: Pumped storage from surplus stream flow at Waggital, Switzerland. p.1151-1152.

Water Cooling: Cooling tanks, central compressor systems. By L. M. Jordan. p.1155-1156.

Wire Rope Use and Care. p.1157-1158.

Refrigerating World. Vol. 66, No. 11. November, 1931.

Pak-Ice Machine. By William H. Taylor. p.12-14.

Machine was designed primarily for storing up of refrigeration in form of frozen liquids such as water or brine.

Refrigeration Cold Storage Air Conditioning. Vol. 2, No. 5. August, 1931.

Small Automatic Refrigerating Machines. By A.A. McCullagh. p.11-16, 10.

Manufacture and Application of Carba Dry Ice. By G.H. Grimwade. p.19-21.

Review of Scientific Instruments. Vol. 2, No. 11. November, 1931.

Exhibit of Testing Apparatus and Machines Held in Connection with the 34th Annual Meeting of the A. S. T.M. Chicago, June 22-26, 1931. p.665-737.

Exhibit was limited only to apparatus, equipment and machines used in testing of materials, effort was made to eliminate recording and control equipment if not used in testing of materials.

Technik in Der Landwirtschaft. Vol. 12, No. 2. February, 1931.

Untersuchungen an Triebketten. (Experiments with drive chains used on agricultural machinery. By Von W. Kloth. p.58-64. This deals with tests wherein the wear and power loss were measured on three types of chains-pressed steel open link, malleable iron open link, and malleable iron closed link - under four operating conditions: 1. Dry without sand; (2) dry with sand; (3) well oiled without sand; and (4) well oiled with sand.

The Bulletin of the United States Golf Association Green Section. Vol. 11, No. 8. August, 1931.

Suggestions on Installation and Use of Fairway Sprinklers. By F. E. Staebner. p.163-169.

The Western Farm Life. Vol. XXXIII, No. 18. September 15, 1931.

Grain Storage Necessary on Mountain Ranch: Adequate granary space saves loss thru waste and low prices at threshing time. By A. H. Gerbaz. p.3, 20.
Movable metal bin saves labor. Metal bin economical storage. Granary should be convenient. Convenient granary on Big Four Ranch. Bulk loading saves sacks.

Trench Silos Cost Almost Nothing to Build. By Elmer J. Johnson. p.5, 22.

Stake out size needed, setting stakes 3 feet back of lines so team will not strike them. Use plow for loosening soil; remove soil with slip or fresno. Use chain hitch 4 to 6 feet long, to get closer to wall. Three men and two teams make good crew. Work to shapes shown; walls slope 1 foot in for each 4 feet in depth. Do not gouge into walls. Excavate with team and tractor as far as possible, then use spade for trimming. End slopes should start 20 feet back from end.

Vol. XXXIII, No. 20. October 15, 1931.

Every Farm Should Have a Good Windbreak: Evergreens are ideal for protection and are among our most hardy trees. By E.R. Parsons. p. 3, 14.

Vol. XXXIII, No. 22. November 15, 1931.

Use Motors and Save the Mothers. By E.T. Loavitt. p.3, 12.

The Library has just received the following publications:

- Appraising the home: A discussion of one of the most fascinating subjects in the field of real estate.
By Horace J. Clark. N.Y., Prentice-Hall, Inc., 1930.
380p.
- Architectural construction. By Walter C. Voss, Ralph Collidge Henry and Edward A. Varney. N.Y., John Wiley and sons, Inc., 1925-1927. 3 v.
v. 1. Analysis of the design and construction of American building. v.2. bk.1. Wood construction.
v.2. bk.2. Steel construction.
- Better homes manual. Edited by Blanche Halbert. Chicago University of Chicago press, 1931. 781 p.
Published in cooperation with Better Homes in America.
- Bibliography relating to farm structures. By Guy Ervin. 1931. 43p. (U.S. Dept. of Agriculture. Miscellaneous publication no. 125.)
- Burning limestone for agricultural use. By Earl G. Welch. Univ. of Kentucky. Extension Division Circ. No. 247. 1931. 8p.
- Canada Department of Agriculture Experiment Station Report of the Superintendent for the year 1930. 1931. 53p.
Farm machinery trials and observations, p.22-24.
Harvesting experiments p.24-28.
- Care of milk and cream and cottage cheese making on the farm. By E.W. Neasham and A.J. Gelpi. 1931. 16p. (Louisiana Agricultural and Mechanical College Extension Circular No. 149)
- Cause and prevention of mechanical injuries to potatoes. By H. O. Werner. 1931. 35p. (Nebraska Agricultural Experiment Station Bulletin 260).
- Combined harvester-thresher in Ohio. By E. A. Silver and J.H. Sitterley. 1931. 50p. (Ohio Agricultural Experiment Station Bulletin No. 491.)
- Conservation of the Public Domain. By William Peterson. 1931. 11p. (Utah State Agricultural College. Extension Service n.s. Circular No. 39.)
- Effect of paper mulches on soil temperature, soil moisture, and yields of certain crops. By Alfred Smith. 1931. 159-201p. (California Agricultural Experiment Station. Hilgardia. v. 6, No.6.)

The Library has just received the following publications: (Cont'd)

- Electricity on Maine farms: A study authorized by the Maine Federation of Agricultural Associations. Prepared by Charles H. Merchant. Federation Committee on Rural Electrification. 1929. 24p. (Maine Dept. of Agriculture.)
- Engineering problems by Westinghouse engineers. Edited by E.B.Roberts. East Pittsburgh, Penn., Westinghouse technical night school press, 1930. 122p.
- Feed grinder investigations. By E.A.Silver. 1931. 49p. (Ohio Agricultural Experiment Station. Bulletin No.490.)
- Handling farm manure. By Charles F. Rhoades. 1931. 8p. (University of Missouri. College of Agriculture. Agricultural Extension Service. Circular no.279.)
- Hog house. By C.W.Stroman. 1931. 3p. mimeographed. (Clemson Agricultural College of South Carolina. Extension Service. Agricultural Engineering Inf.Circ.No.9.)
- House insulation: its economics and application. Report of the subcommittee on House Insulation: Its economics and application of the National Committee on Wood Utilization. 1931. 52p. (U.S. Department of Commerce. Wood Utilization.)
- Influence of weather on crops: 1900-1930: A selected and annotated bibliography. Compiled by A.M.Hannay, under direction of Mary G. Lacy, Librarian. 1931. 246p. (U.S. Dept. of Agriculture. Miscellaneous publication No.118.)
- Installation of a hydraulic ram. By J.T.McAlister and C.W.Stroman. 1931. 10p. mimeographed. (South Carolina Clemson Agricultural College. Extension Service. Agricultural Engineering Inf. Circ. No.9)
- Maintaining the broad base terrace. By J.T.McAlister. 1931. 8p. mimeographed. (South Carolina Clemson Agricultural College. Extension Service. Agricultural Engineering. Inf. Circ. No.4.)
- Management of Nebraska soils. By P.H.Stewart and D.L. Gross. 1931. 39p. (Nebraska Agricultural College. Extension Service. Extension Circular no.133.)
- Manure piles and feed lots as sources of European corn borer reinfestation. By L.B.Scott. 1931. 13p. (U.S. Dept. of Agriculture. Circular No.194.)

The Library has just received the following publications: (Cont'd)

Mechanical training. By William Boss, J. Grant Dent and Hall B. White. Saint Paul, Bruce Publishing Company, 1931. 269p.
A book of instructions on the use of mechanical tools and the construction of exercises demonstrating fundamental principles in mechanical work.

Missouri type milk houses. By M.J.Regan and R.W.Oberlin. 1931. 12p.
Two very definite objectives have been kept in mind in designing these houses: (1) To reduce to minimum time and labor involved in cooling and handling milk and cream, and in cleaning dairy utensils; and (2) To meet increasing demand of consumer for product of uniformly high quality.
(University of Missouri. Agricultural Extension Service. Circular no.277.)

Oklahoma wind-electric power. By E.B.Kurtz. 1931. 14p.
(Oklahoma Agricultural and Mechanical College. Division of engineering. Publications v.2, no.4.)

Plans for small combination milking barn and milk house.
By C.W.Stroman. 1931. 9p. mimeographed.
(South Carolina Clemson Agricultural College. Extension Service. Agricultural Engineering Inf. Circ. No.5.)

Pocket-book of useful formulae and memoranda for civil and mechanical engineers. By Sir Guilford L. Molesworth. London, E. and F.N.Spon, Ltd., 1931. 935p.

Practical homemade sweet potato vine-cutter. By C.W.Stroman. 1931. 2p mimeographed. (South Carolina Clemson Agricultural college. Extension Service. Agricultural Engineering Inf. Circ. No.10.)

President's conference on home building and home ownership. Committee reports. 1931.

Principles of underdrainage. By R.D.Walker. London, Chapman and Hall, Ltd., 1929. 223p.

Progress report on mechanical application of fertilizers to cotton in South Carolina, 1930. By G.A.Cumings, A.L. Mehring, G.H.Serviss, and Ward H. Sachs. 1931. 31p.
(U.S. Dept. of Agriculture. Circular no.192.)

Regulations governing the impounding of waters. 1927. 15p. (Alabama State Board of Health.)

Relations between crop yields and precipitation in the Great Plains area: Supplement 1.--Crop rotations and tillage methods. By E.C.Chilcott. 1931. 164p. (U.S. Dept. of Agriculture. Miscellaneous Circular No.81. Supp.1.)

The Library has just received the following publications: (Cont'd)

- Relative heat transfer through refractories. By A.S. Watts and R.M. King. 1931. 32p. (Ohio Engineering Experiment Station Bulletin No. 64.)
- Self-feeder for hogs. By J.T. McAlister and C.W. Stroman. 1931. 4p. mimeographed. (South Carolina Clemson Agricultural College. Extension Service. Agricultural Engineering Inf. Circ. No. 8.)
- Septic tank for farm homes. By J.T. McAlister and C.W. Stroman. 1931. 10 p. Mimeographed. (South Carolina Clemson Agricultural College. Extension Service. Agricultural Engineering Inf. Circ. No. 7.)
- Slash disposal in the western yellow pine forests of Oregon and Washington. By Thornton T. Munger, and R.H. Westvold. 1931. 58p. (U.S. Dept of Agriculture. Technical Bulletin No.259.)
- Some fundamentals of stable ventilation. By Henry Prentiss Armsby and Max Kriss. 1921. 343-368p. (Reprinted from Journal of Agricultural Research Vol. XXI, No. 5. June 1, 1921.)
- Southern Pine Homes. Published by Southern Pine Association, New Orleans, La., 1926. 60 p.
- Strength of concrete block plasters under varied eccentric loading. By J.R. Shank and H. D. Foster. 1931. 35p. (Ohio Engineering Experiment Station Bulletin No. 60.)
- Temporary Silos. By G. E. Martin. 1931. 11p. (University of Missouri College of Agriculture, Agricultural Extension Service Circular No. 281.)
- Tests of gas home-heating equipment. By R.B. Lockie and C.H. B. Hotchkiss. 1931. 166p. (Research Series No. 36. Purdue Engineering Experiment Station.)
- Trench silo. By C. W. Stroman. 1931. 8p. Mimeographed. (South Carolina Clemson Agricultural College. Extension Service. Agricultural Engineering Inf. Circ. No. 6.)
- Use of green manures in soil improvement. By M.F. Miller. 1931. 12p. (University of Missouri College of Agriculture. Agricultural Extension Service Circular No. 280.)
- Variety tests of sugarcane in Louisiana during the crop year 1929-30. By George Arceneaux, I.E. Stokes, and R.B. Bisland. 1931. 23p. (U.S. Dept. of Agriculture Circular No. 187.)

